

A P P E N D I X II:

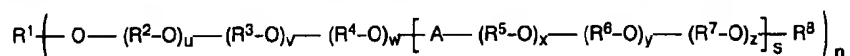
THE CURRENT CLAIMS (clean version):

1. (currently amended) A soft capsule shell comprising

- (a) from 10 to 100% of polymers prepared by polymerization of vinyl esters in the presence of polyethers
- (b) from 0 to 80% of structure-improving auxiliaries and
- (c) from 0 to 30% of other constituents selected from the group consisting of fillers, release agents, flow aids, stabilizers, water-soluble or water-insoluble dyes, flavorings and sweeteners,

and wherein the polymers (a) are obtained by free-radical polymerization of

- a) at least one vinyl ester of C₁-C₂₄-carboxylic acids in the presence of
- b) polyether-containing compounds of the general formula I



in which the variables have, independently of one another, the following meaning:

R¹ hydrogen, C₁-C₂₄-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-, polyalcohol residue;

R⁵ hydrogen, C₁-C₂₄-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

R² to R⁴ -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH₂-CH(R⁶)-, -CH₂-CHOR⁷-CH₂-;

R⁶ C₁-C₂₄-alkyl;

R⁷ hydrogen, C₁-C₂₄-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

A -C(=O)-O-, -C(=O)-B-C(=O)-O-, -C(=O)-NH-B-NH-C(=O)-O-;

B -(CH₂)_t-, arylene, optionally substituted;

n 1 to 1000;

s 0 to 1000;

t 1 to 12;

u 1 to 5000;

v 0 to 5000;

w 0 to 5000;

x 0 to 5000;

y 0 to 5000;

z 0 to 5000;

and

c) from 0 to 50% of one or more other copolymerizable monomers and subsequent at least partial hydrolysis of the ester functions in the original monomers a).

2. (canceled)

3. (canceled)

2 4. (currently amended) A soft capsule shell as claimed in claim 1, wherein the polyether-containing compounds of formula I have a number average molecular weight of from 300 to 100000, and the variables have, independently of one another, the following meaning:

R¹ hydrogen, C₁-C₁₂-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-, polyalcohol residue;

R⁵ hydrogen, C₁-C₁₂-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

R² to R⁴ -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH₂-CH(R⁶)-, -CH₂-CHOR⁷-CH₂-;

R⁶ C₁-C₁₂-alkyl;

R⁷ hydrogen, C₁-C₁₂-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

n 1 to 8;

s 0;

u 2 to 2000;

v 0 to 2000;

w 0 to 2000.

3 5. (currently amended) A soft capsule shell as claimed in claim 1, wherein the polyether-containing compounds of formula I have a number average molecular weight of from 500 to 50000, and the variables have, independently of one another, the following meaning:

R¹ hydrogen, C₁-C₆-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

R⁵ hydrogen, C₁-C₆-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

R² to R⁴ -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH₂-CH(R⁶)-, -CH₂-CHOR⁷-CH₂-;

R⁶ C₁-C₆-alkyl;

R⁷ hydrogen, C₁-C₆-alkyl, R⁶-C(=O)-, R⁶-NH-C(=O)-;

n 1;

s 0;
u 5 to 1000;
v 0 to 1000;
w 0 to 1000.

4 6. (currently amended) A soft capsule shell as claimed in claim 1, wherein the polymers (a) are obtained by free-radical polymerization of

a) at least one vinyl ester of C₁-C₂₄-carboxylic acids in the presence of

b) polyether-containing compounds and

c) one or more other copolymerizable monomers

and subsequent at least partial hydrolysis of the ester functions in the original monomers a), wherein the polyether-containing compounds b) have been prepared by polymerization of ethylenically unsaturated alkylene oxide-containing monomers, alone or together with other copolymerizable monomers.

5 7. (currently amended) A soft capsule shell as claimed in claim 6, wherein the polyether-containing compounds b) have been prepared by polymerization of polyalkylene oxide vinyl ethers, alone or together with other copolymerizable monomers.

6 8. (currently amended) A soft capsule shell as claimed in claim 6, wherein the polyether-containing compounds b) have been prepared by polymerization of polyalkylene oxide (meth)acrylates, alone or together with other copolymerizable monomers.

7 9. (currently amended) A soft capsule shell as claimed in claim 1, wherein said other copolymerizable monomers c) are selected from the group consisting of:

acrylic acid, methacrylic acid, maleic acid, fumaric acid, crotonic acid, maleic anhydride and its monoesters, methyl acrylate, methyl methacrylate, ethyl acrylate, ethyl methacrylate, n-butyl acrylate, n-butyl methacrylate, t-butyl acrylate, t-butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, 2-ethylhexyl acrylate, stearyl acrylate, stearyl methacrylate, N-t-butylacrylamide, N-octylacrylamide, 2-hydroxyethyl acrylate, hydroxypropyl acrylates, 2-hydroxyethyl methacrylate, hydroxypropyl methacrylates, alkylene glycol (meth)acrylates, styrene, unsaturated sulfonic acids.

- 8 10. (currently amended) A soft capsule shell as claimed in claim 1, wherein the amounts of a), b) and c) are
- a) 10 to 98% by weight
 - b) 2 to 90% by weight
 - c) 0 to 50% by weight.
- 9 11. (currently amended) A soft capsule shell as claimed in claim 1, wherein the amounts of a), b) and c) are
- a) 50 to 97% by weight
 - b) 3 to 50% by weight
 - c) 0 to 20% by weight.
- 10 12. (currently amended) A soft capsule shell as claimed in claim 1, wherein the amounts of a), b) and c) are
- a) 65 to 97% by weight
 - b) 3 to 35% by weight
 - c) 0 to 20% by weight.
- 11 13. (currently amended) A soft capsule shell as claimed in claim 1, wherein the resulting polymers are subsequently crosslinked.
- 12 14. (currently amended) A soft capsule shell as claimed in claim ¹¹13, wherein the resulting polymers are subsequently crosslinked by reaction with one or more compounds selected from the group consisting of dialdehydes, diketones, dicarboxylic acids, boric acid, boric acid salts, and salts of multiply charged cations.
- (13) 15. (currently amended) A soft capsule shell as claimed in claim 1, wherein the structure-improving auxiliaries (b) employed are compounds from the following classes:
- a) polymers with a molecular weight of more than 50000,
 - b) substances leading to crosslinking of the polymer chains of the polymers,
 - c) and, optionally, substances which lead to crosslinking of the polymer chains of the structure-improving auxiliaries.
- 14 16. (currently amended) A soft capsule shell as claimed in claim 1, wherein the structure-improving auxiliaries employed are polymers selected from the group consisting of the following classes of substances: polyamino acids, polysaccharides and synthetic polymers.

17. (canceled)
- 15 18. (currently amended) A soft capsule shell as claimed in claim 1, which consists of from 10 to 100% by weight of polymers of vinyl esters on polyether, from 0 to 80% of structure-improving auxiliaries and from 0 to 30% of said other constituents.
- 16 19. (currently amended) A soft capsule shell as claimed in claim 1, obtained by a process selected from the groups consisting of the rotary die process, Accogel process, Norton process, drop or blow process or the Colton-Upjohn process.
- 17 20. (currently amended) A soft capsule shell as claimed in claim 1, which encapsulates one or more active pharmaceutical ingredients, vitamins, carotenoids, minerals, trace elements, food supplements, cosmetic active ingredients, crop protection agents, bath additives, perfume, flavoring, cleaners or detergents.
- 18 21. (currently amended) A soft capsule shell as claimed in claim 1, wherein the shell comprises from 20 to 80% of a polymer resistant to gastric fluid.
- 19 22. (currently amended) A soft capsule shell as claimed in claim 1, wherein resistance to gastric fluid is achieved by applying after production a coating resistant to gastric fluid by pharmaceutical coating processes.
- 20 23. (currently amended) A soft capsule shell as claimed in claim ¹⁷20 which encapsulates one or more pharmaceutical ingredients.
- 21 24. (currently amended) A soft capsule shell as claimed in claim ¹⁷20 which encapsulates one or more cosmetic active ingredients, crop protection agents, for cleaners or food supplements.
25. (canceled)
26. (canceled)
- 22 27. (currently amended) A soft capsule shell as claimed in claim ¹⁴16, wherein said polyamino acids are selected from the group consisting of gelatin, zein, soybean protein and derivatives thereof.
- 23 28. (currently amended) A soft capsule shell as claimed in claim ¹⁴18, wherein said polysaccharides are selected from the group consisting of starch, degraded starch, maltodextrins, carboxymethylstarch, cellulose, hydroxypropylmethylcellulose, hydroxypropylcel-

lulose, hydroxyethylcellulose, methylcellulose, carboxymethylcellulose, ethylcellulose, cellulose acetate, cellulose acetate phthalate, hydroxypropylcellulose acetate phthalate, hydroxypropylcellulose acetate succinate, hemicellulose, galactomannans, pectins, alginates, carrageenans, xanthan, gellan, dextran, curdlan, pullulan, gum arabic, chitin, and derivatives thereof. 14/

24 29. (currently amended) A soft capsule shell as claimed in claim 16, wherein said synthetic polymers are selected from the group consisting of polyacrylic acid, polymethacrylic acid, copolymers of acrylic esters and methacrylic esters, polyvinyl alcohols, polyvinyl acetate, polyethylene glycols, polyoxyethylene/polyoxypropylene block copolymers, polyvinylpyrrolidones and derivatives thereof.

25 30. (currently amended) A soft capsule shell as claimed in claim 1, wherein the amounts of (a), (b) and (c) are:

- (a) 20 to 98% by weight;
- (b) 1 to 50% by weight; and
- (c) 0.1 to 30% by weight.